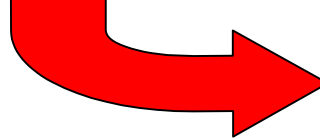


CALIFORNIA ENERGY COMMISSION
Peak Load Reduction Program
Battery Backup Program for LED Traffic Signals Program Summary

Program Description: The Battery Backup Program for Light Emitting Diode (LED) Traffic Signals provided California's local governments with grants for installing battery backup systems at many street intersections. These systems provide electrical backup to traffic signals that use LED's instead of old-fashioned (and energy inefficient) incandescent bulbs. The Program was created as a result of California's Senate Bill 84xx [2001] to encourage the installation of LED traffic signals and to provide additional safety during electric outages.



Project Results: Battery backup systems provide an important safety benefit to Californians. In the past, traffic signals would go dark whenever there was an electrical interruption – whether due to a large system outage or damage to a local distribution pole. A battery backup system keeps the traffic signals working.

These systems also encourage the installation of additional traffic signals that use LED technologies. LED-equipped traffic signals use 80 to 90 percent less electricity than traditional incandescent signals. The Commission's Program specifically provides grants only to local governments with LED-equipped traffic signals.

Funding Details: Grants were awarded to more than 180 local governments throughout the State (scroll down to see map of project locations), affecting more than 4700 traffic intersections. As a result of these grants, California's local governments received more than \$9.8 million to help offset the cost of these installations.

Lessons Learned: Local governments were able to receive grants for two general types of LED traffic signal – those signals that were “fully functional” (i.e., red, green, and yellow lights are LED's) or “red-only”. Several local governments indicated that, *if they could do it all over again*, they would have purchased signals that were all “fully-functional”.

Red-only LED signals work well, but the incremental cost for “fully-functional” signals seem to be easily offset by the energy savings of LED technology (as compared to incandescent lamps). In addition, a “fully-functional” signal provides seamless operation even during electric interruptions. (Flashing-red intersections can back-up traffic flows during similar interruptions.) The safety benefits of battery backups combined with the energy savings of LED signals will likely make these installations the standard choice for new and existing traffic signals everywhere.

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LED Battery Backup



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